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A Study of the Implementation of the Generalization in Resource Conservation Curriculum

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A STUDY OF THE IMPLEMENTATION OF THE GENERALIZATION IN RESOURCE CONSERVATION CURRICULUM

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CHAPTER I

INTRODUCTION

American society must keep open a path of free inquiry and develop in its citizens responsible commitments in thought and action. The social studies is a very fruitful area in which students can develop these well-reasoned judgments. The experiences, concepts, and generalizations which students encounter in this area can stimulate critical thinking and analysis so necessary for successful transition in a rapidly changing world. The task is simply to provide the tools for student examination and analysis--they will reach their own decisions constructively.

I. THE PROBLEM

Statement of the problem. It was the purpose of this study (1) to select one-hundred generalizations related to resource conservation from a listing of approximately three-thousand items originating in seven Stanford doctoral dissertations, (2) to indicate the precise chapter and/or unit within a specific text (Brown, Gertrude S., Your Country and Mine, Our American Neighbors, Boston: Ginn & Company, 1958.) in which the teacher would develop a particular generalization, and (3) to develop a list of suggestions for each specific generalization compatible with resource conservation study.

Importance of the study. Growth, development, and learning have always been requisite skills in education. Moreover, systems to promote these skills have been in controversy since education's inception in America. Since education has always been the tool to effect these knowledges and skills, it remains a problem how best to nurture rewarding experiences for learners. It has been this writer's conviction, namely, to utilize various experiential media to effect this end. Notwithstanding previous efforts in this regard, revitalization of learning can take place by usage of pertinent generalizations in experiential situations within unit or chapter studies of basic textual materials.

II. DEFINITION OF TERMS USED

Generalization. Throughout this writing, a generalization has been interpreted as "a large central idea" around which learning in the social studies curriculum will be organized. The students studying social studies have need of experiential background whereby they may arrive at a general notion or concept. Involvement in many related experiential situations can produce these notions or concepts which lead to the larger idea--the generalization.

Concept. A concept has been interpreted as an abstraction that can apply to a class or group of objects having certain qualities in common. Many related experiences

in one's environment have the potential to facilitate concept formation.

Experience. The subjectivity of an individual to his surroundings and his awareness to temporal or passing phenomena has been interpreted as conscious reality. If one encounters various related phenomena, he has gained experiential background leading to conceptual judgment.

Resource. Throughout this study, resource has been interpreted as the collective human and natural wealth of America. Education has a duty to inform citizens so they may approach their citizenship roles more intelligently. Unit study using broad central ideas in this area with varied experiential situations is essential to expedite learning of citizenship roles to be played in society.

Conservation. Interpretation of conservation in our study has involved both human and natural resources within or contiguous to the United States. Recognition that exploitation of irrestorable or slowly restorable natural resources must inevitably lead to their destruction has focused attention to a need for social control. A rapidly changing world (social and technological) indeed underlines the need for adequate learning situations for students. Skills are essential and may be obtained by experiential treatment of textual materials centered around relevant generalizations compatible with student maturity.

CHAPTER II

REVIEW OF THE LITERATURE

Various writers have expressed their convictions regarding the value of the generalization in enriching present and future learning situations. Accordingly, this writer has studied the literature pertaining to the generalization in order to determine how others synthesize its utility in the social studies curriculum (and other). In addition, the writer has studied how others consider the generalization as a tool in resource conservation study. This review of the literature has been concerned specifically with the concept of the generalization's usage as a skill and concept-builder in any study of conservation of human and natural resources.

I. LITERATURE ON THE VALUE OF THE GENERALIZATION IN LEARNING

McCreary expressed the convictions of many writers in his premise stating a need for more critical thinking and problem solving in American society. Moreover, he expressed concern for a needful dynamic search for knowledge predicated on all available related phenomena. McCreary stated that (21:179):

> Critical thinking and problem solving are essential in a democracy--they are our way of finding and telling the truth. . . . Students need experience in the clash of alternative solutions to vital problems--they need to seek evidence and marshall data. . . . A generous examination of all viewpoints, evidence, arguments, and

> theories can develop the informed loyalty of free men who have practiced free thought, moral choice, and responsible decision and prefer them over authoritarian indoctrination characteristic of totalitarian systems.

Seligman and Johnson approached the problem directly declaring, "Basic need is to shape a curriculum based upon broad concepts and values (15:70)." However, such a program must entail, according to Seligman and Johnson, ". . . learning experiences appropriate to the pupil's own age on these concepts and values. . . (15:70)."

Cowles expressed confidence in student ability to learn many related phenomena (16:105):

> Pupils can be taught how to set objectives related to problems, make generalizations, propose solutions, find more evidence if necessary, and finally, to reach tentative conclusions. In this way children learn the process of rational thinking, as opposed to rote memorization of facts--and learning becomes meaningful.

Preston extended the scope and importance attached to the learning process when he stated that (23:211-12):

> The key to depth in learning is found in the medieval maxim: "Learn as though you were to live forever; live as though you were to die tomorrow." . . . In our century, Alfred North Whitehead wrote: ". . . what you teach, teach thoroughly. . . Let the main ideas which are introduced into a child's education be few and important, and let them be thrown into every combination possible.

Coladarei also predicated the learning process upon the experiences to which a learner is subjected (2:435):

> It is probably no exaggeration to say that both educational method and curriculum contents are predicated on the assumption that the specific experiences that the child is having in the classroom will enable him to deal more effectively with other, future experiences.

Rehage, moreover, after having observed an investigation of student learning activities, expressed confidence in the ability of the learner to enlarge his field of experience if provided with an experiential environment (24:183-84):

> . . . Children were found to have a great range of knowledge about a variety of topics. In many instances the children were obviously struggling to understand ideas that were remote in time and space, as well as some of the phenomena observed in the world about them. The investigators observed children engaging in behaviors that could be described as "associating ideas, attempting to discover cause and effect relationships, classifying and generalizing about those things which they see, hear, and feel in their environment." Thus it appeared that the children were in fact using the basic processes employed in concept formation.

Crabtree enlarged on the generalization as one of the most important tools in teaching. She emphasized that, "Generalizations are among the most important goals toward which we teach. Factual learnings are more easily forgotten (3:270-71)." She has, therefore, summed up the synthesis of other writers' convictions when she suggested that, "Teachers facilitate children's inductive thinking in the following ways (3:270-71):

1. Capitalize on opportunities which help children think through to larger relationships whenever possible.
2. Help children analyze this inductive thinking process.
3. Help children evaluate how "open" their thinking is to new evidence.

4. Remember that inductive thinking is above all a creative process. . . . big ideas are invented.

Dimond related the generalization to the social studies curriculum when he expressed the need for thinking toward "power knowledge." Generalizing, according to Dimond ". . . is dangerous . . . without facts, no one can ever have all the facts. But this should not keep us from making a generalization. Most of us have to generalize with such facts as we have at our command. This should be the situation in social studies classes. A failure to generalize is a fatal defect in social studies teaching (17:232-34)."

Inasmuch as modern innovations promote societal change, acquisition of essential knowledges and skills from the social studies curriculum (and other) becomes increasingly important. Perhaps at no time in modern times has the learning of conceptual knowledges and skills been of more importance to American society. Writers agree that change is prevalent today. Hofstrand reported that (10:40):

> Our horizons change, our environment evolves, our means increase, and data that were once considered sound become unsound or purely outdated. The adult who today generalizes on the basis of the authority of his experience rather than the textbook authority of the past can make new decisions rather than be bound to tradition that existed only because it superseded a previous tradition. The pupil who learns to generalize and check his generalizations against the assertions of others is likely to be the adult who can assess the present view of the past.

Dimond corroborated Hofstrand's statement that present

and future learning would require the acquisition of large reservoirs of knowledge and skills. Dimond stated that (17:234):

> The rapid increase in knowledge makes obsolete much of the factual information learned today. Unless facts are employed to test the truthfulness of generalizations the learning process is incomplete. . . . The reciprocal relationship between facts and generalizations is the focal point in . . . teaching of the social studies.

Crabtree reiterated the teaching of generalizations as a means of acquiring knowledge, "We teach generalizations only if we help children think toward them with meaning. We do so (1) by helping children build meaning for all the concepts enmeshed in the generalization, and, (2) by helping them relate these concepts inductively into some "bigger idea," the generalization (3:270-71)."

Throughout the literature, thoughts were expressed regarding the value of the generalization as a means of promoting greater learning. A synthesis of the literature follows:

1. Learning must depend upon various related experiences leading to conceptual judgment.
2. Curriculum needs must be based upon broad concepts.
3. Learners must employ rational thinking procedures in varied activities to reach valid conclusions.
4. Depth of learning results only from experiences directly related to large central ideas.

5. Methods and curriculum must depend upon specific experiences related to broad concepts.
6. Learners naturally seek larger concepts providing they enjoy an experiential environment.
7. Generalizations are important goals toward the enrichment of learning situations.
8. Generalizations facilitate inductive thinking.
9. New innovations and change have precipitated a need for generalizing in the learning process.
10. Social studies classes can successfully employ the generalization as a tool to learning.
11. The generalization is a tool to synthesize data.
12. Usage of the generalization stimulates critical thinking skills.

Finally, the aforementioned ideas have expressed the value of the generalization as a tool in promoting concept skill-building within the social studies curriculum. Review of the literature indicated a concern for the improvement of curriculum teaching procedures. Further, it indicated that a definite need exists for greater incremential learning situations. Its considered conclusions indicate the generalization as an appropriate tool toward this goal.

Perhaps no greater problem has existed in modern times than the equitable allocation and conservation of resources. Modern technology, expanding in every sphere, has consistently

sought new ways and modes of resource allocation to satisfy the wants and needs of society. Various articles have appeared expressing concern for the rapidity of extraction and utilization of slowly restorable and/or irrestorable resources. These expositions have expressed a common concern for the need of intelligent conservation practices.

II. LITERATURE ON THE CONSERVATION OF HUMAN AND NATURAL RESOURCES

Crabtree, while expressing a need for critical thinking regarding resource conservation, designated the immediate resource problem. Crabtree stated that, "People everywhere are dependent upon natural resources for the satisfaction of their needs (3:270-71)." Statement of this idea dissipates any thought that resources are non-important adjuncts of our society but, conversely, expresses the importance of resource conservation very vividly.

Seligman and Johnson stipulated a basic concept in resource conservation, "A great wealth of natural resources has helped make our country a rich nation. Conservation of these resources is important to keep our country prosperous (15:95)."

Both Crabtree and Seligman have agreed that America's wealth of resources was instrumental in producing the high level of culture which American society now enjoys. Future

cultural gains, according to these authors, will depend upon intelligent allocation and/or conservation of available resources.

Merrifield enlarged the scope of the problem to the social sphere. He stressed the societal role which must be played in order to realize an advancing social order (22:74):

> Economic understanding, however, is not simply another subject matter area. It literally permeates the academic curriculum. It is a way of viewing the social process in the free type of society is uniquely held in the hands of the people comprising it--in the hands of a broadly constituted citizenry. It becomes essential, in this view, that all young people obtain at least a reasonably accurate acquaintance with the manner in which their economy operates. Its problems, the various policy alternatives, the likely consequences of making this or that decision--all are involved in the economic aspect of good citizenship. Only in some such fashion is it likely that the major mistakes of the past can be avoided, and sound economic pathways charted.

Engle, in alluding to the worth incident to decision-making in the social studies, declared the part society must play in solving its social problems (18:301):

> My theme is a very simple one. It is that, in teaching the social studies, we should emphasize decision making as against mere remembering. We should emphasize decision making at two levels: at the level of deciding what group of descriptive data, means how these data may be summarized or generalized, what principles they suggest, and also decision making at the level of policy determination, which requires a synthesis of facts, principles, and values usually not all found on one side of the question.

Then, Hill suggested a means to motivate learners' thinking on other social problems (19:52):

> With most units, teachers are finding more ways to

> provide an experience approach through which their pupils may gain social studies understandings, appreciations, and skills. For example, when children are studying about the conservation of our natural resources, they go out-of-doors and beautify their school grounds, build a nature trail or plant seeds which will grow to provide food and shelter for wildlife. . . . These are kinds of "action" experiences from which children derive social studies learning in ways that are useful to them and their communities.

Finally, the literature has denoted the following implications:

1. Resources are expendable.
2. Some present American cultural attributes originated from past natural resource abundance.
3. Wasteful usage of natural resources will be inimical to American cultural survival.

Significantly, therefore, resource conservation has been basic in this review for compatible ideas, concepts, experiences, generalizations, and related media for developing motivating and stimulating environments for learners. It has been established that the values herein expressed will prove of value in the social studies curriculum.

CHAPTER III

THE MATERIALS USED AND PROCEDURE

This study has been particularly concerned with human and natural resource conservation. In addition, the methods for gaining new insights in these areas have been pursued throughout the study. Furthermore, the versatility of the generalization (as a large reservoir of knowledge) has prompted its adoption to this study in order to more adequately establish experiential situations in related social studies curriculums. Teaching suggestions have been provided with each generalization in support of basic concepts included within a basic social studies text (Brown, Gertrude S., Your Country and Mine, Our American Neighbors, Boston: Ginn & Company, 1958). The usage of each generalization coupled with an appropriate teaching activity within the scope of the aforementioned social studies text (and area of study) should provide incremental learnings in virtually any teaching situation.

I. PROCEDURE

This study has utilized specific generalizations in conjunction with resource conservation study. Each generalization has been carefully screened for content and placed in one of the following areas of concentration: conservation, economy, education, government, organization, production, resources, society, transportation, and tools. Each of the

foregoing areas has been organized to include a sequential listing of the selected generalizations using Roman numerals. Specific generalizations (developed in sequence) have been organized in the following ways: identification of the author and pagination of the generalization from its original context, key phrases or sentences illustrating the generalization, and activity teaching suggestions. Each of the foregoing procedures has been developed in sequence per generalization.

An illustrative generalization (as organized in the text) follows:

XX. . . . a very difficult habitat, to which a people have made an adjustment, does not encourage experimentation in the field of technology (5:95).

A difficult place in which to live doesn't encourage invention (XII:235).

1. Describe conditions which might make living hard for man.
2. Show a film (Desert Nomads: French Morocco. CWSC).
3. Interpret the life habits of desert wanderers.
4. Identify some reasons why desert wanderers invent very few new innovations.
5. Interpret contemporary life in terms of environment and invention.

The essence of each particular generalization's value in this writing is the specificity with which it may be employed.

This paper has concerned itself with (1) specific generalizations related to conservation, (2) identification of the author and origin of the particular generalization from the context of the author's dissertation, (3) redefinition of the specific generalization in a phrase or sentence to be developed in correlation with a specific textbook (Brown, Gertrude S., Your Country and Mine, Our American Neighbors, Boston: Ginn & Company, 1958), and (4) five teaching suggestions for each specific generalization. The author emphasizes that each generalization has been redefined in simpler wording so as to facilitate teacher and student usage. Teachers wishing to use this work may utilize each specific generalization outside the scope of this paper using the listed activities as guidelines in correlation with their own texts.

II. THE LARGE CENTRAL IDEA: THE GENERALIZATION

I. RESOURCES

I. Though some aspects of the original environment of every area, including certain elements of the fauna and flora handicapped early man, the life forms as a group were an asset. They supplied food; material shelters, clothing and utensils; and later, beasts of burden to decrease the drudgery and increase production (12:87).

Most parts of the original environment helped early man: I:7; III:61-62; X:175; XVIII:321

1. Show the film "Stone Age." CWSC.
2. Make a list of pre-European foods, tools, and habitations.
3. Construct a chart representing all known Indian tribes' original environmental situations in the United States.
4. Write a story about Indian life before contact with the White man.
5. Write a report concerning a particular Indian tribe and its problems when faced with European contacts.

II. In the simple cultures of hunters and foodgatherers, the people had to live where food could be found, moving on when it was depleted (12:91).

Primitive man had to live where food could be found: I:7; III:61-62; X:175; XVIII:321

1. Describe the movement of the American Indian in search of food.
2. Read for information (library sources) and list the different foods available to the American Indians.
3. Construct a mural depicting some aspect of food hunting or gathering.
4. Discuss why some food resources remained

inexhaustible to the American Indian.

5. Discuss how the European invasion of North America destroyed the hunting and gathering economy of the American Indian.

III. While people are supporting themselves with hunting, fishing and wild-food gathering, the area will support only a thin population (12:91).

A hunting and fishing economy will support a very small population: XVIII:326-28

1. Describe the life of the Eskimo as related in your text.
2. Analyze the differences between the resource potentials located on the Arctic Coastal Plain and the continental United States.
3. Interpret the cultural attributes of the Eskimo.
4. Begin an exhibit of aboriginal artifacts found in the local area.
5. Draw a suitable picture to illustrate the expendable nature of natural resources located on the Arctic Plain.

IV. Climatic condition is one factor that determines comparative advantage of one region over others for the production of particular commodities (12:92).

Climate determines the productive advantage of one

region over another: VIII:153-54; IX:163-64; XI:198-99; XII:214-16

1. Discuss the reasons for climatic variations between regions of the United States.
2. Show the film, "Our Weather." CWSC.
3. Construct a plaster-of-Paris relief map of the United States and color-code regional precipitation variations.
4. Contrast local climatic regions with other state areas.
5. Construct a graph depicting precipitation and temperature variations between different climatic regions within the United States.

V. The productive potential of any group depends upon many factors: The quantity and quality of its natural resources available for working (12:96).

The production of any group depends upon its natural resource supply: VIII:154-57

1. Contrast the diversity of resources in America and locate several specific mineral locations.
2. Differentiate between the different soil groups in America.
3. Draw a map of the United States placing main mineral locations on the map: Coal, iron ore, limestone, water, soil groups, etc.

4. Have the students analyze reasons for population concentrations in the proximity of significant mineral deposits and large watercourses.
5. Make a list of major mineral resource locations within and contiguous to the United States.

VI. . . . physical goods, unlike human wants, cannot be increased indefinitely; indeed, certain materials such as coal and iron ore cannot be increased at all, so far as the total stock is concerned (12:99).

Coal, iron ore, and some other minerals cannot be restored once they are used by man: VIII:152-54; X:183; XI:204; XII:214

1. Discuss the extractive and irrestorable aspects of coal and iron ore.
2. Read for information and suggest how America can allocate these resources in a way to conserve them.
3. Draw a picture of a typical coal or iron mine.
4. Have the students analyze cause and effect relationships pertinent to the depletion of coal and iron ore resources.
5. Discuss aspects of other mineral allocation, depletion, and conservation practices.

VII. . . . the supply of each factor (of production) is not of uniform quality, but varies in grade from very

good to very poor (12:106).

Each factor of production varies in quality: XII:224-25

1. Discuss the iron ore resource potential still remaining in the Great Lakes region.
2. Discuss the depletion of high quality iron ore resources and the allocation of "taconite" in the Minnesota region.
3. Draw circle graphs to illustrate the iron-bearing contents of high and low grade iron ores.
4. Have the students suggest alternative solutions to the depletion dilemma of high grade iron ore.
5. Collect various specimens of iron ore to illustrate differing qualities.

VIII. Three fifths of the world's agricultural wealth today is estimated to derive from plants unknown to Europe before Columbus (12:113).

Many plants unknown in Europe before Columbus originated in America: X:180-81

1. Read for information to determine what plant made early Virginians wealthy.
2. Discuss several plants which originated in America.
3. Make a list of plants native to the New World but which were unknown in Europe before Columbus.
4. Analyze the benefits obtained by the importation

of new plants from other lands for utilization in American agriculture.

5. Discuss the important food plants used extensively in America today.

IX. The ocean is an important factor in man's economic life for it furnishes him with many resources and makes possible many extractive industries (12:117).

The ocean furnishes man with many products: IX:165-66; X:202; XII:205; XIII:248-49

1. Have the students relate individual experiences while at the seashore or ocean.
2. Discuss animal life and minerals to be found in bays, estuaries, and off-shore banks.
3. Discuss the different industries which originate as a result of man's use of animal and mineral elements found in salt water bodies of the world.
4. Read for information concerning different minerals which originate in salt water bodies.
5. Write a report (using library references) about a specific industry that is dependent upon the ocean as a supply source.

X. Many factors contribute to national prestige but one of the most important is prominence in mineral production (12:117).

Mineral production provides one of the means for national greatness: VIII:154-57

1. Discuss reasons why mineral production has made America a world leader.
2. Read to determine what specific mineral deposits were responsible for great industrial developments in the United States.
3. Analyze the part that allocation of certain important minerals has to national greatness.
4. Discuss the scarcity of minerals and the effect it has on national greatness.
5. Discuss cause and effect relationships of mineral resource depletion.

XI. Climatic conditions and available natural resources limit the goods which may be produced, and only those goods which can be brought in which will stand high transportation costs (11:100).

Production of goods is limited by transportation costs, climatic conditions, and available natural resources: XIII:238

1. Have students collect pictures of different climatic regions, cloud forms, etc.
2. Make a climate graph of the United States.
3. Show the film, "Weather, Breath of Life." CWSC.
4. Take a field trip to Rocky Reach Dam located on

the Columbia River; discuss on return.

5. Interpret the reason why bauxite is transported from South America to the Columbia River (In Washington) for processing.

XII. Land otherwise fertile and fit for agricultural production, or endowed with mineral deposits, or provided with timber is of little value except as reserve facilities for future development, unless transportation facilities are available to transport products (11:102).

Land resources are of little value without transportation facilities to transport goods to market: II:44-48

1. Interpret the effect that the construction of the Wilderness Road from Southwest Virginia to Kentucky had upon the development of Kentucky.
2. Use an opaque projector to construct a map of this region; place the Wilderness Road route on the map.
3. Analyze the reasons for pioneer cutting-down of timber whereas today we stress conservation principles in this regard.
4. Bring local agricultural products to class; tell what part transportation had in their production.
5. Differentiate between contemporary land allocation practices (Columbia Basin) and pioneer efforts.

XIII. The mathematical or natural location of a place never changes, but the vicinal location of the same locality changes with the development of better transportation or of natural resources (11:153).

Transportation and/or resource development(s) improve(s) the importance of a region: XIV:256-58; 260-272

1. Formulate reasons for pioneer settlements near rivers, lakes, and coastlines.
2. Identify the value of road-building in the economic development of an area.
3. Read to determine several different methods of transportation used in pioneer times into wilderness areas as means of developing the areas.
4. Analyze the economic changes which take place when adequate transportation is provided a regional area.
5. Discuss the part that transportation has in the exploitation of America's natural resources.

XIV. . . . the opportunity to invent metallurgy (is afforded) only by environments which supply available ore (11:111).

Mineral resources are necessary for industrial activities: XII:224-25

1. Locate the Central States on your maps; interpret

the reasons for its being called the "heart of our country."

2. Draw a map illustrating the iron ore ranges in the Lake Superior region of the United States.
3. Discuss the extractive nature of the iron mining industry.
4. Analyze and examine depletion problems of the iron mining industry.
5. Have a resource person (ALCOA) discuss mining and conservation problems.

XV. Men are interdependent at the same time they are wholly different, and because these things are so, they need community organization, policies and laws, and the means of enforcing them (8:86).

The need for community organization makes policies of law enforcement necessary: XVI:290-302

1. Show the film "Law and Social Controls." CWSC.
2. Construct a mural depicting local, state, and national government hierarchies.
3. Organize a model government based upon local, state, and national norms.
4. Discuss community aspects of law and order.
5. Analyze reasons why men need laws to conserve human life and dignity.

XVI. Inland waters and seaside locations (serve) as centers for health and recreation (9:120).

Salt and inland water locations are ideal recreational areas: IX:172-73; XI:208-9; XIII:250-54; XVII:313-14

1. Show the film "Water In The West." CWSC.
2. Make a movie travelogue of scenic and recreational areas in the United States.
3. Analyze the value of having pure and unpolluted streams, lakes, rivers, and oceans.
4. Have students who have visited National parks describe government practices at these sites to protect waters from pollution.
5. Discuss how people, animals, and industrial activities are instrumental in polluting otherwise pure waters.

XVII. Mountains attract lowlanders as health and recreation centers (9:119).

Mountainous areas are excellent vacation regions: XIII:250-54

1. Make a large map of the United States with an opaque projector indicating the main mountain regions located in the United States.
2. Make a pictorial dictionary of National Park locations in the United States.

3. Write a report concerning the recreational aspects one would find in a mountain region.
4. Read for information to determine the recreational advantages to be obtained in mountainous regions.
5. Give an oral talk describing the physical attributes of mountainous regions.

XVIII. Materials presented by nature may be utilized, but Nature does not determine how they will be used (12:88).

Nature does not determine how her resources will be used: X:183-85; XII:224-26; XIII:245-46; XVIII:324-26

1. Have a resource person from the Grant County PUD report to the class on the value of conserving water.
2. Discuss local mineral deposits and make a chart for notebooks.
3. Read source books in the library pertaining to resource locations, industrial proximities to mineral locations, and human factors near these areas; discuss.
4. Show film "Magic of Sulphur." CWSC.
5. Have class members bring manufactured items from home to illustrate man's dependence upon Nature for her resources.

II. CONSERVATION

XIX. (A primary task of government is) . . . promoting the general welfare (10:101).

Government protects the people: XVI:290-99

1. Define "government."
2. Read the Constitution and Declaration of Independence.
3. Discuss man's reasons for forming a government.
4. Do a skit depicting government.
5. Analyze the reasons why government protects its citizens.

XX. It is the role of social institutions to help man put his talents to good use and realize his hopes and ambitions (8:91).

It is the school's responsibility to educate man: XVII:304-14

1. Write a biographical sketch of a great American.
2. Read for information regarding pioneer educational practices.
3. Begin a glossary of terms; place "talents" on your list.
4. Do a diorama of pioneer life.
5. Show film "Education in America: 17th and 18th Centuries." CWSC.

XXI. Once the superiority of metal tools became evident . . . necessary raw materials became less abundant and less evenly distributed (12:166).

Invention of metal tools has made resources less plentiful: X:183-85

1. Discuss mining, manufacturing, and conservation practices.
2. Analyze the consequences of new innovations in tool manufacture on resource allocation.
3. Show film "Natural Resources of the Pacific Coast." CWSC.
4. Write a theme discussing depletion of natural resources.
5. Discuss the irrestorable and restorable mineral resources; list them in notebooks.

XXII. In every society certain activities are considered of great importance to the general welfare (8:82).

Certain activities in every culture are very important: I:7-22

1. Write a report concerning American rebellion against England.
2. Discuss colonial patriotic ideals.
3. Make a time line of historic events during this period.
4. Do a "You Are There" program depicting early

colonial opposition to English governing of the Colonies.

5. Have a group discussion conerning American democratic ideals.

III. PRODUCTION

XXIII. . . . limitation of the total resources capable of producing different commodities necessitates a choice between relatively scarce commodities (12:92).

Limitation of available resources necessitates a choice between relatively scarce materials for producing different commodities: VIII:156

1. Discuss the depletion of America's timber resources since colonial times.
2. Have a resource person discuss forest conservation principles (Othello, Wn. office).
3. Make a list of various wood substitutes and relate reasons for their uses in place of wood.
4. Set up an exhibit of various home building materials.
5. Make a poster depicting resources which are in short supply.

XXIV. . . . (The Family) is the primary agent in molding of the life habits and the life attitudes of human beings (8:98).

The family is very important in educating each human being: XVII:304

1. Organize a play depicting early Puritan life in The New England Colonies.
2. Discuss the ethical values which the Puritans believed and practiced.
3. Paint a picture depicting colonial family life.
4. Read to determine the different educational institutions which originated in New England as a result of home influence.
5. Show film "Colonial Life in New England." CWSC.

XXV. Both animal and vegetable products are extensively used in the manufacture of clothing (12:119).

Both animal and vegetable products are used to manufacture clothing: IX:170

1. Bring items used in textile manufacture to school.
2. Make a list of different resources used in making clothing.
3. Have a local farmer describe sheep raising as a source of textile fibers.
4. Have students analyze different cloth goods to determine wearing qualities, economic considerations, and utility.
5. Show film "Clothes We Wear." CWSC.

XXVI. . . . man takes the products of the extractive and genetic industries, applies power and design to them, and creates form utility (10:111).

Man makes tools for his use: I:6; II:37, 51-2; VII:129-30, 139

1. Use a dictionary to find as many tools as possible from its listing; describe their uses.
2. Differentiate the difference between tool usage for war or peace production.
3. Discuss different tool form-utilities.
4. Construct a mural depicting different tools and their corresponding utility values.
5. Search for newspaper accounts of new tool designs.

IV. TRANSPORTATION

XXVII. Trade makes resources available far from where nature left them (12:130).

Trade between different countries provides many resources that would not ordinarily be available: I:9-9; III:56; IV:72-3; VII:125; XI:206-7

1. Discuss early colonial trade in the extractive industries (shipbuilding, ship stores, etc.).
2. Set up a classroom trading exchange utilizing "extractive" material resources.
3. Analyze trading practices in the United States

pertaining to "short supply" resources.

4. Make a booklet pictorializing resource items which are in short supply.
5. Write a report discussing trade between countries which provides scarce resources to countries needing them.

XXVIII. Earliest trade resulted from difference in natural resources in particular areas (12:31).

Differences in natural resource deposits throughout the world have promoted trade: IV:72-3; XVIII:319-24

1. Show film "Caravans of Trade: The Story of Transportation." CWSC.
2. Read for information in your text to determine the extent of the American fur trade--both trapping and bartering.
3. Analyze the reasons for fur trading practices during the early nineteenth century in the United States.
4. Describe the uses of furs.
5. Write a summary concerning the fur trading era in American history.

XXIX. Historically, transportation by water has played an important role in . . . the development of the

areas of the world producing raw materials and those in which goods are manufactured and distributed (11:92).

Water transportation has helped develop resource and manufacturing activities throughout the world: XIV:260-63

1. Discuss port activities which one might witness on a waterfront location.
2. Write a report concerning goods that travel by water.
3. Collect pictures (from magazines, travel brochures, etc.) to illustrate water transportation carriers.
4. Make a map of the main trade routes of the world sealanes.
5. Arrange a suitable bulletin board using a seascape theme.

XXX. A society with a very simple technology and lacking any means of transportation save human carriers is confined to the resources of a single area and may achieve only a bare subsistence (11:101).

Men live a very simple life if they lack knowledge of modern technology: II:49-50; X:175

1. Read to discover the cultural practices of early aboriginal Indians in America.
2. Describe the subsistence diet of the American Indian.

3. Make a chart depicting reasons why the American Indian lived a bare subsistence diet often times.
4. Write a story about Indian life.
5. Take a field trip to the Gingko Park to examine Early Man exhibits. Visit Rocky Reach dam site.

XXXI. Location of industries close to the sources of raw materials assures that hauls of the heavy materials and supplies will be relatively short by railroad, by water, or by highway, and that transportation charges will be low (11:106).

Industrial manufacturing costs are lowest if plants are located near resource areas: XII:224

1. Draw a map of the Mesabi Range located in Minnesota.
2. Demonstrate the usefulness of the Great Lakes to this iron-bearing region.
3. Show film "Drama of Steel." CWSC.
4. Make a chart illustrating the principal iron, coal, and petroleum resource areas located in the United States; list chief industrial areas, also.
5. Make a relief map of the Great Lakes-Mesabi Range complex.

XXXII. The location of pipelines is determined on the one hand by the occurrence of productive oil wells, and

on the other by the position of refineries or of storage points to which oil is brought from the fields (11:139).

Oil wells and refinery locations determine where pipelines will be located: XI:204

1. Draw a map showing main pipeline installations in the United States.
2. Analyze the reasons why pipelines run principally to the Great Lakes and Northeastern United States regions.
3. Discuss the conservation aspects of pipeline transportation.
4. Discuss local pipeline transportation facilities.
5. Summarize the conservation aspects of the petroleum industry as related to pipeline, oil refinery, and industrial plant.

XXXIII. The long-distance transportation of natural gas has contributed greatly to the development of the production, distribution, and consumption of this fuel. (11:139).

Improvement in transportation of natural gas has increased its usage: XI:202

1. Show film "Refining Oil for Energy." CWSC.
2. Discuss the physical properties of natural gas.
3. Group to study the origin of natural gas.
4. Construct a miniature natural gas field using

models supplied by oil companies.

5. Make posters concerning origin and distribution of natural gas.

XXXIV. Wherever it was that cities "originated" they awaited agricultural surplus, a sufficiently complex technology to exploit that surplus, and the means of transporting goods to and from a rural hinterland (11:143).

Agricultural surplus, technology, and transportation contributed to the origin of cities:

1. Make a list of contemporary cities which were small settlements in America originally.
2. Discuss the reasons why some early American settlements failed to grow and eventually declined to nothing.
3. Make a floor map of early settlement patterns in America.
4. Interpret the reasons for city growth in any region.
5. Show the film "City." CWSC.

XXXV. Utilization of coal and iron ore made possible the railroad, steamboat, and many other inventions (10:101).

Available coal and iron ore resources stimulated invention: XII:226-29; XIV:260-65

1. Write a report concerning Robert Fulton's

invention of the steamboat.

2. Discuss the conservation aspects of steamboat navigation as opposed to horse and buggy transportation.
3. Read to determine the variety of inventions which followed the utilization of coal and iron ore metallurgy in the United States during the nineteenth century.
4. Develop ideas concerning future metallurgical innovations.
5. Tell a story about some great invention or inventor.

XXXVI. Man's conquest of the ocean has transformed it from an almost insuperable barrier to a world highway of trade, travel, and communication (10:102).

Man now uses the ocean for trade, travel, and communication: XIV:260-63

1. Construct a map showing the main world trade routes.
2. Create a story of the sea.
3. Construct a wall hanging depicting man's conquest of the ocean.
4. Dramatize an original story of the sea.
5. Construct wood replicas of famous ships of the sea.

XXXVII. . . . (through) the transformation of matter

and energy into the moving of goods from a place where they are less useful to a place where they are more useful (man creates utility) (10:113).

Man utilizes matter and energy to transport goods from low utility areas to greater utility locations: XII:224-26

1. Explain why resources are more valuable in large industrial locations rather than in a rural hinterland.
2. Describe several places in the world that have large mineral locations in isolated locations.
3. Organize a report concerning movement of goods from rural hinterlands (Labrador-Quebec border to U. S.) to manufacturing centers.
4. Give an explanation for the utility value of a resource in the mine and factory.
5. Share information regarding transportation of goods from mine to factory.

V. ECONOMY

XXXVIII. If a nation is to enjoy a high standard of living, it needs--in addition to manpower, natural resources and know-how--a large quantity of the best capital equipment (12:110).

Natural resources, technology, and capital equipment

are necessary before a nation can enjoy a high standard of living: X:176-190

1. Analyze the value of human skills in contemporary technology.
2. Discuss the allocation of resources in the Great Lakes region of the United States.
3. Analyze the conservation aspects of industrialization in the United States.
4. Critically examine the resource depletion problem.
5. Summarize information pertaining to industrialization, resources, and technology as they affect American living standards.

XXXIX. In the pastoral stage, the population supporting capacity of land is appreciably greater than in the wild food-gathering stage (12:111).

Agriculture will support a larger population than wild food-gathering: IX:164-65, 166-67; X:180-83; XI:196-97; XI:199-202; XIII:238-41; XVIII:323-24

1. Discuss land usage in America prior to the arrival of Europeans upon the continent of North America.
2. Discuss the changes that the White man immediately instituted to the virgin wilderness areas of the frontier.
3. Analyze the differences between the subsistence (gathering) economies of the American Indians

and the sedentary European occupations.

4. Draw a map showing the encroachments of the Europeans upon the American Indian societies.
5. Write a narrative theme concerning "subsistence."

XL. The primary means of livelihood of the peasant is cultivation of the soil (12:114).

Agriculture provides the farmer with a living: IX:164-65; X:180-83; XI:196-97; XII:214, 216--24; XIII:238-41; XVIII:323-24

1. Have children relate information pertaining to local farming practices.
2. Plot the different farming regions on a map.
3. Show film "Food and Soil." USDA.
4. Have students interview a local farmer to learn economic facets of food production.
5. Review important farming practices (as suggested in the textbook) and list them in notebooks.

XLI. By means of their technology, men wrest from their habitat, the foodstuffs, the shelter, the clothing, and the implements they must have if they are to survive (12:180).

Technology aids man in his life activities: II:41-2

1. List natural resources that the pioneers utilized but which the Indians had failed to develop.

2. Analyze the difficulties which the pioneers faced on the frontier in colonial times.
3. Discuss the English settlement of the Atlantic Coastal Plain in colonial times.
4. Identify the reasons why certain resources (such as trees) were destroyed by the early colonists.
5. Dramatize early colonial life as one might suppose it occurred in colonial times.

XLII. People differ widely in the complexity and efficiency of their technologies (obtaining materials, processing and distributing them) and hence in the degree to which they may fully exploit the environmental resources (12:180).

Cultures differ in the extent to which they utilize the environmental resources: II:44-54

1. Read to discover information concerning the advance of the pioneers from the Atlantic Coastal Plain into the interior of the continent.
2. Analyze the changes which the Europeans made upon the face-of-the-land as they advanced inland.
3. Critically examine Indian and European cultural traits to determine how each differed from the other.
4. Explain the social framework of Indian society.

5. Discuss reasons for dissolution of Indian society as the White man occupied his lands.

XLIII. Man adapts, shapes, utilizes, and exploits the world of nature to his own ends (10:79).

Man adapts, shapes, utilizes, and exploits the products of nature to his own ends: IX:159-173

1. Write a theme regarding New England pioneer developments of its available natural resources.
2. Analyze the natural resource aspects of the New England region in colonial times.
3. Interpret the interdependence of the New England area with other areas of the United States in contemporary times.
4. List ways in which man can shape and use resources but conserve them simultaneously.
5. Show film "New England Fisherman." CWSC.

XLIV. . . . man is . . . the originator, designer, and fashioner of all that great assemblage of features that results from his living and utilizing the earth (10:89).

Man originates, designs, and fashions all the assembled features that result from his living and utilizing the earth: XI:192-202

1. Read to determine how the Southern States (U. S.) were transformed from a wilderness to contemporary utility.

2. Discuss the value of the Mississippi River to America.
3. Interpret the usefulness of the agricultural regions in the Southern States to American society.
4. Describe ways in which Americans can conserve soil, water, and mineral resources in this region.
5. Show film "Southeastern States." CWSC.

XLV. . . . the inventor can work only with the tools, i.e., the knowledge, and the materials, he possesses (10:100).

The inventor can work only if he possesses the essential knowledges, tools, and materials: XI:202-04

1. Analyze the interdependence of each human being to other in invention.
2. Create a story concerning invention.
3. Describe the importance of knowledge to invention.
4. Draw a time line showing the development of contemporary machines from earlier models.
5. Show film "Scientific Method In Action." CWSC.

XLVI. Resources presented by the natural world are shaped (by man) to meet the existing needs (10:94).

Man utilizes resources for his needs: II:36-42

1. Read for information concerning early pioneer usage of natural resources in Kentucky.

2. Discuss the early frontier trading posts.
3. Construct a bulletin board depicting various frontier innovations.
4. Do a diorama illustrating early allocation of resources in the Kentucky-Ohio regions.
5. Show film "Kentucky Pioneers." CWSC.

XLVII. . . . man uses various elements and processes in Nature to produce more of certain substances which he already has (10:112).

Man uses Nature's materials to produce goods: XIII:231-246

1. Give an illustrated report depicting various farm products produced from man's utilization of soil, water, and minerals to produce food resources.
2. Discuss conservation of water resources.
3. List the main river systems of the Western United States.
4. Describe the economic aspects of large hydro-electric power developments situated on major river systems in the United States.
5. Make a wall-hanging depicting agricultural innovations made possible by the use of water, minerals, and soil.

XLVIII. . . . great stores of energy were locked up

in coal and other combustibles until men invented devices by which the release of this power might be canalized and directed (10:101).

Man's invention provided means to utilize energy resources: IX:154; X:183; XI;204; XII:224; XIII:246

1. Discuss contemporary uses of coal.
2. Begin a mineral museum; exhibit different types of coal.
3. Construct a map (opaque projection) illustrating the principal coal beds located in the United States.
4. List as many industrial uses of coal as possible.
5. Write a theme concerning energy resources located in the United States.

XLIX. Men the world over have found how to make better use of soil, and how, with special fertilizers and crops, to build it to greater value (10:112).

All men have better farming methods to improve soil: VIII:154

1. Describe soil conservation practices.
2. Analyze the responsibility of each citizen in promoting soil and other resource conservation.
3. Construct a soil profile.
4. Do a skit extolling the virtues of soil conservation

practices.

5. Study to determine what plant foods must be added to soil to conserve its fertility.

L. . . . man takes various materials directly from Nature. In doing so, he produces . . . material or substance utility (10:112).

Man takes Nature's resources for his personal use: IV:72-3

1. Relate the Oregon Country's part in the early American fur trade.
2. Dramatize the early fur trading era which happened in the Rocky Mountains.
3. Sketch the life of a pioneer fur trader-trapper.
4. Discuss the utility of furs in this period.
5. Write a report of the Overland Trail from the far West to Kansas City, Missouri.

LI. The serious inroads which (modern) man has made upon the forests of the Cyclonic and Sub-tropical Zones have compelled him to develop a permanent form of forest industry known as silvaculture . . . the systematic growing of timer [sic] on a crop basis (10:113).

Destruction of temperate forests by man has forced him to cultivate tree crops: XIII:246-48

1. Describe the allocation and usefulness of timber.

2. Write to the U. S. Forest Service for study materials compatible to this subject.
3. Interpret the reason for less timber present today than in colonial times.
4. Plant some seed-bearing cones from evergreen trees and start a nursery.
5. Analyze the main reasons why Americans must conserve their forest resources.

LII. Man adapts, shapes, utilizes, and exploits the world of nature to his own ends (10:79).

Man uses Nature for his own ends: XIII:248

1. Visit a salmon hatchery (Moses Lake, Wn.).
2. Write a theme concerning fish spawning practices in the Columbia River; relate the power dam problems which migrating fish encounter.
3. Analyze the hydro-electric dam developments in terms of fish conservation and/or energy resources for man.
4. Trace the life cycle of the salmon fingerling.
5. Interpret man's wildlife conservation practices as they apply to migratory birds and fish.

VI. SOCIETY

LIII. The distribution of population by geographic

regions is affected by climate, the quality of the earth's surface, the location of natural resources, and the existence of waterways (11:148).

Climate and geography affect the distribution of population in regions: XII:211-23

1. Describe the resource aspects of soil groups located in the Central States.
2. Draw a relief map depicting the dairy, corn, and wheat regions; analyze their value to the nation.
3. Discuss man's health as a vital resource and the part that foods have in conserving it.
4. Interpret the climatic and geographic aspects of the Central States.
5. Identify significant waterways in this region.

LIV. . . . the distribution of resources, topography, and development of commerce and transportation are interdependent and complimentary in explaining the distribution of population (11:178).

Development of commerce, distribution of resources topography, and transportation are complimentary and interdependent in explaining the distribution of population: XIV:256-73

1. Describe contemporary transportation systems in the United States.
2. Discuss transportation systems in colonial times

(1600-1790).

3. Analyze the changes in transportation that have taken place in the United States in the last 350 years.
4. Define commerce and its implications.
5. Show film "Earth's Rocky Crust." CWSC.

LV. The attitudes of the pupils depend in part, on the spirit of the teacher, which in turn reflects the attitudes of her superiors and the community in which she lives (14:81).

Attitudes of pupils depend partly upon the teacher's spirit which is a reflection from her superiors and the community: XVI:292-94

1. Define self-government and individual attitudes.
2. Draw a graph representing the lines of responsibility emanating from community, teacher and administrator.
3. Elect class officers and discuss their responsibilities.
4. Analyze proper attitudes between pupils which would promote better relations between all class members.
5. Discuss our national government and delineate areas of responsibilities.

LVI. The totality of human culture is cumulative.

Increasingly, we stand on the shoulders of those who have gone before us (14:110).

Human culture builds upon former societal contributions: XVI:290-92

1. Construct a glossary of terms pertaining to American government.
2. Organize a play utilizing American government as the theme.
3. Analyze the reasons why colonial reformers during the Revolutionary War period planned a Constitution and Declaration of Independence.
4. Have the class share ideas regarding conservation of human ideals, dignity, and freedom.
5. Construct a "freedom document" to correlate our Constitution.

LVII. Every small group is held together by lines of communication between its individual members. Other lines run outward to other groups (14:112).

Communication between individuals ties the group together; communication from the group also extends to others: XV:294-5

1. Discuss how city government protects its citizens.
2. Do a diorama of city government.
3. Describe the responsibilities of city government (and its citizens) to outlying areas.

4. Critically analyze the essential qualities of government; discuss the conservation aspects.
5. Read to determine how each citizen can participate most effectively in community-city government.

LVIII. Each invention depends upon the previous body of knowledge (10:78).

Invention is dependent upon previous knowledge: XVII:208-11

1. Discuss contemporary innovations and the need for education of each citizen.
2. Make a book of profiles illustrating several inventors' contributions to man as a result of previous men's efforts, knowledges, and skills.
3. Take a field trip to a local fire station to inspect its equipment; relate the usefulness of this equipment in conserving property and human life.
4. Make a list of useful machines which conserve life and property.
5. Show film "Machine Maker." CWSC.

LIX. New mechanical devices and scientific discoveries depend upon the available accumulation of knowledge (10:78).

New mechanical devices and scientific discoveries

depend upon available knowledge: XVII:308-11

1. Show film "Machines That Move Earth." CWSC
2. Create a story relating to scientific discovery--relate it to education.
3. Discuss how new mechanical devices and scientific discoveries modify human life.
4. Analyze contemporary scientific innovations.
5. Interpret how new scientific innovations have affected conservation practices by society.

LX. . . . the tools that man uses, the art he creates, the Gods he worships, his courtship and marriage practices, his very ideas, are dependent on his social heritage (10:78).

Man's social heritage influences his cultural activities: I:7-22

1. Draw a mural depicting an original interpretation of some aspect of American social heritage.
2. Analyze the value of human freedom to the individual.
3. Construct a freedom chart.
4. Discuss the tools that men used during the colonial era in America.
5. Listen to a recording "The Alamo." LCC.

LXI. Every inventor builds upon the accumulation of previously acquired knowledge, and, therefore, every invention is dependent upon the available accumulation of knowledge of

the culture (10:78).

Previously acquired knowledge promotes invention: XVII:310-11

1. Discuss the values of education.
2. Dramatize the invention of some particular contemporary innovation.
3. Have each class member "invent" some gadget to share with the rest of the class.
4. Have the class list "brainstorms" which would benefit American society if invented.
5. Write a story concerning America's dependence upon inventive genius in a rapidly changing world.

LXII. . . . change in culture is derived from . . . invention and borrowing (10:96).

Cultural change is fostered by invention and borrowing: XIV:256-73

1. Draw timelines illustrating American transportation, manufacturing, and city developments during its history.
2. Discuss American cultural progress as relating to resource allocation and utilization.
3. Differentiate between contemporary and colonial cultural attributes in America.

4. Construct a bulletin board illustrating some aspect of American culture.
5. Make a movie travelogue depicting the 1607-1965 era of time in American history.

LXIII. Along with his discoveries of ways to utilize animals, plants, metals, wind, water, and other natural objects and forces to satisfy his wants, man has made . . . social discoveries and inventions (10:109).

Man has discovered social innovations and inventions as well as utilization of the natural world: XVI:290-302

1. Discuss basic human freedoms.
2. Make a list of "basic" human freedoms.
3. Organize a dramatization of a miniature United States utilizing a progression of political elevation (Grass roots-National government) to illustrate the interdependencies of groups of people within a society.
4. List "freedom concept ideas" in the glossary.
5. Learn the first article of the United States Constitution.

LXIV. Not until metallurgical operations were perfected for extracting . . . metals from their ores did man climb the ladder of civilization at more than a snail's pace; . . . (10:111).

Metallurgy provided man with the environment for new social innovations: II:49-50; III:61-2; IV:72; X:175 XVIII:318-19

1. Analyze the American environmental resources as they were utilized by the Indian and European cultures.
2. Pictoralize some important resource items which Europeans utilized in contrast to Indian non-use.
3. Interpret and discuss the cultural dislocations suffered by the American Indian societies as a result of the new American-European technology.
4. List "advantages" of European living standards vis-a-vis the American Indian during this historical period.
5. List cultural concepts (European and Indian) to notebooks.

LXV. . . . transportation and technological developments within a culture take up and discard the materials presented by Nature, and effect great changes in the total pattern of community life (10:114).

Transportation and technological developments modify Nature and community life: XIV:256-73

1. Describe early road building efforts into the wilderness areas of the Eastern United States.
2. Discuss contemporary patterns of road building

and transportation.

3. List as many contemporary transportation and technological innovations as possible in notebooks.
4. Make a report on one facet of transportation using a "then and now" theme.
5. Show film Caravans of Trade--The Story of Transportation." CWSC.

LXVI. The types (of shelters created by man) depend very largely on the cutting tools available, environmental resources, facilities for importing building materials, the exigencies of the food quest, and historical contacts (10:102).

Tools, available food, historical contacts, and environmental resources were instrumental in man's development of certain types of shelters: VII:128-32

1. Read for information to determine the types of food, tools, and shelters which man utilized during the colonial era in American history.
2. Analyze the Frontier environment.
3. Construct a bulletin board utilizing some facet of colonial tools, food usage, resource allocation.
4. Read a story concerning pioneer life.
5. Draw pictures of American-European and Indian habitations during the early seventeenth century.

LXVII. The city is an environment created by society,

in which for the purposes of community living many aspects of the natural environment are entirely eliminated (10:124).

Many aspects of the natural environment are destroyed in the growth of the city: X:186-90

1. Discuss the aspects of the environment prior to European colonization and founding of early American cities.
2. Discuss reasons for specific locations of some large contemporary American cities.
3. Analyze the reasons why most human beings prefer to live in cities or other habitations in preference to living in the natural environment.
4. List the advantages or disadvantages which contemporary cities possess over those of pioneer times.
5. Interpret the changes that a city makes upon the natural environment.

LXVIII. Recreation and other educative forces may bring about more acceptable living by enticing the individual to activities that, in the long run, are more meaningful and worthwhile (9:102).

Recreation and other social forces promote better individual adjustments in life: IX:172-73; XI:208-9; XIII:250-54; XVII:313-14

1. Discuss traditional games and recreational

activities of Americans.

2. Interpret the conservation aspects of recreation.
3. Write a report pertaining to a particular recreational area.
4. Gather statistics pertaining to various recreational areas and share them with the class.
5. Add pertinent words to the glossary regarding the conservation aspects of recreation.

LXIX. Life in an organized society involves a collective effort to make human existence more meaningful and more satisfactory (8:81).

Organized society involves a collective effort to make life more meaningful and satisfactory: XVI:301-2

1. Interpret the human aspects of society.
2. Analyze individual responsibilities with regard to society.
3. Make a chart defining the responsibilities of Americans in promoting citizenship goals.
4. Analyze the disorganization within a society as a result of a natural disaster.
5. Discuss the values of "working together."

LXX. An (organization's) existence is dependent upon the cooperation and performance of individuals who play different roles (8:83).

Role-playing by different individuals promotes societal organization: XVI:301-2

1. Discuss "good"government in America.
2. Interpret individual effort in promoting "good" government in America.
3. Define "democracy."
4. List different roles which persons should fulfill in order to promote freedom in society.
5. Sing a patriotic song "America."

LXXI. The geographic area sets the boundaries for common living and creates a basis for solidarity (8:85).

Geographical location provides a basis for group residence and living: VIII:146-56

1. Discuss the settlements of people in different regions of the United States.
2. Describe the natural boundaries which separate Americans from other cultural groups.
3. Make a mural depicting the cultural and recreational aspects of American geography which tends to solidify cultural mores.
4. Read a folk tale which illustrates some facet of American geography.
5. Discuss the natural settings in America which have inspired art, literature, and music.

LXXII. A person is a personality because he takes over the institutions of that community into his own conduct (8:85).

Personality usually originates from learned cultural mores: V:97-8

1. Interpret why people live together in communities.
2. Analyze the individual's responsibility in community life.
3. Discuss the value and worth of each individual to his community.
4. Draw a map of the Mormon trek to Utah.
5. Write a biographical sketch of some prominent Mormon pioneer.

LXXIII. It is the role of all social institutions to help man put his talents to good use and realize his hopes and ambitions (8:91).

All social institutions are meant to help man put his talents to the best use: XVII:308

1. Write a biographical sketch of Horace Mann.
2. Discuss why each person must be trained in order to realize the most from his latent talents.
3. Describe what social institutions comprise in America.
4. Interpret the conservation of each human being

through the medium of training.

5. Write a report concerning any facet of local training which tends to conserve human talent.

LXXIV. Individuals . . . are of great importance . . . but their importance stems from their actual or potential relationship to groups (8:102).

Individuals become important as a result of their group relationships: XVII:311

1. Dramatize individual group roles which persons should perform.
2. List ways in which individuals adapt to group membership.
3. Analyze the values obtained from group membership.
4. List new words pertaining to community life in notebooks.
5. Share experiences which relate to group interactions and goals.

LXXV. A democratic society derives its strength from the effective functioning of the multitude of groups it contains (8:122).

The strength of a democratic society results from the effective functioning (interactions) of its many groups: VI:105-123

1. Interpret the reasons for civil war in a society.

2. Define human slavery.
3. Give a report concerning some important man of the American Civil War period.
4. Relate the value of preserving the Union.
5. Analyze the preservation of human resources during and following the American Civil War period.

LXXVI. In a rural community the family is the most important source of socialization (8:99).

The family is the most important source of social interactions within a rural community: II:44-48

1. Discuss pioneer life as discussed in the textbook.
2. Organize a committee to learn about "social interactions."
3. Dramatize a contemporary interpretation of home life.
4. Discuss the interactions within a contemporary home in contrast to its pioneer counterpart.
5. Define "interactions."

LXXVII. Men work in groups, worship in groups, and in democratic states they must seek to govern through groups (8:99).

Work, worship, and governing are social orders which unite groups of people together: I:7-35

1. Discuss reasons why men must join together in various cultural activities.
2. List reasons why the colonists (1700's) decided not to cooperate with England any longer.
3. Discuss the environmental circumstances of the American frontier during the eighteenth century.
4. Draw a picture of a common activity which employed the social and work activities of the American colonists during the eighteenth century.
5. Analyze the "spirit of the frontier" which cemented Americans together during these times.

LXXVIII. . . . people are extremely important to each other. Attitudes toward one's self are a part of the same picture which includes attitudes toward others (8:103).

Attitudes are important aspects of relations between different individuals: I:17

1. Analyze Patrick Henry's patriotic ideals and human dignity.
2. Write significant ideas related to attitudes toward others and their importance to each individual.
3. Write a theme related to the topic "Give me liberty or give me death."
4. Discuss the attitudes one feels about himself.

5. Describe how attitudes can help us in our relations one with the other.

VII. EDUCATION

LXXIX. . . . the cultural attitudes actually acquired bear the mark of unique experiences (14:82).

Acquired cultural attitudes bear the mark of unique experiences: I:18-20

1. Discuss the resource aspects of "independence."
2. Relate American independence from England at the end of the Revolutionary War.
3. Describe some American cultural attitudes.
4. Create a story or poem expressing an American tradition.
5. Read American historical perspectives and share them with the rest of the class.

LXXX. Whatever the effective intrasociety group that controls the educative agency, it will seek to give the students a common language, and a common set of ideas, beliefs, and values. . . (14:83).

Every societal group that controls the educational system seeks to educate students: XVII:308-10

1. Show film "Children Growing up With Other People." CWSC.

2. List reasons why it is mandatory to attend public school in America for a specified number of years.
3. Discuss a "common" language, belief, idea, or value.
4. Write a story concerning an idea you have obtained while attending school.
5. Have a foreign exchange student discuss educational ideals of his homeland.

LXXXI. The customs of the group are translated through education, . . . into the habits of each generation, and the habits thus formed perpetuate the customs (14:84).

Each generation acquires its habits and customs from the preceding one: XVII:314

1. Discuss American "customs."
2. Define "habits."
3. Make a trip to a historical shrine.
4. Analyze the cultural mores which the American Indian inculcated its members.
5. Construct a chart depicting cultural attributes.

LXXXII. All peoples instruct the young in how to interpret the behavior of their fellows and how to act in specific situations and toward persons to whom they stand in particular kinds of relations (14:85).

All peoples instruct the young in societary roles and relations: XVII:304-7

1. Discuss the essential skills which colonial people considered important.
2. Dramatize a colonial "dame" school.
3. Calculate the number of educational institutions available during colonial times.
4. Analyze the historical aspects of education in the New England colonies.
5. Make a profile of learning activities which were utilized during colonial times; compare this to the contemporary scene.

LXXXIII. The school can provide many kinds of education which the home could never furnish (14:87).

The school furnishes education which the home cannot furnish: XVII:307-8

1. List skills and activities that contemporary schools provide to learners.
2. Discuss the differences between home and school training.
3. Write a report concerning a specific subject which aids citizens in adjusting to society.
4. Describe the school's resource aspects.
5. List ways in which citizens may assist the school in its educative process.

LXXXIV. A complex, technologically advanced society, greatly dependent upon science and rapidly changing, requires an elaborate system of instruction and indoctrination if it is not to regress to simpler levels (14:90).

An advanced technological society requires an elaborate educational system: X:183-86

1. Analyze the variety of machines emanating from contemporary metallurgy.
2. Discuss the manufacture of steel and its connotations.
3. Discuss the resource aspects of education in dispensing knowledges and skills pertaining to technology.
4. Write a report concerning the advances in technology in recent years.
5. Draw a mural depicting recent technological innovations.

LXXXV. The child learns from his mother, father, and other persons in his environment the ideas, habits, attitudes and values which have been built into their personalities as the result of a similar process of learning from others in their group (14:92).

The child learns ideas, habits, attitudes, and values from mother, father, and others in his environment which (in turn) have learned similar learnings from others in

their group: XVII:304-7

1. List different ideas, habits, and attitudes that young Americans learned in pioneer times.
2. Describe some values in your immediate family that you consider important.
3. Relate some ways in which one learns from others (not father or mother).
4. Write a theme discussing the "learnings" which parents obtained from others.
5. Discuss the interdependencies between persons who meet each other in learning situations.

LXXXVI. The different parts of culture are all related to one another and do not function separately. Thus, . . . the family is correlated with the educational system, . . . (14:94).

The family is correlated with the educational system: XVII:304-7

1. Construct a chart illustrating the hierarchy of education.
2. Discuss the home as an educational institution.
3. Interpret the binding forces which tie society together.
4. Read for information in the library concerning culture; share findings with the rest of the class.

5. Suggest ways in which the family could aid the educational institutions in providing better educational opportunities for Americans.

LXXXVII. The group is always interested in transmitting its ideals to the young, for only in this way can the group standards be preserved (14:95).

The group transmits its ideals to the young in order to preserve them: XVII:307-8

1. Describe the reasons for education in America.
2. Make a biographical sketch of some prominent American (living or dead).
3. Interpret the reasons for personal success in any facet of life.
4. Describe a means of obtaining personal success in the American society.
5. Draw a poster depicting a pioneer classroom.

LXXXVIII. . . . a nation in crisis turns immediately to its schools to make demands upon them for changes to meet the new social education (14:99).

Crisis motivates educational innovations within a society: VII:138-42

1. Discuss the allocation of human and natural resources during a major war effort.
2. Analyze the part education plays in peace planning.

3. Define "social" education.
4. Describe the variety of world problems which education is called upon to solve.
5. Define "all-out war."

LXXXIX. The individual is a living member of the whole deriving his life from it through social and hereditary transmission; the transmission of the cultural heritage from one generation to another is a universal purpose of education (14:101).

Transmission of the culture is the prime purpose of educating individuals: XVII:311

1. Discuss reasons why an individual must become educated.
2. Discuss the conservation aspects of educating individuals.
3. Describe the hierarchy of human members within a culture.
4. Develop a skit depicting the transmission of cultural attributes to citizens.
5. Draw an education poster illustrating transmission of cultural attributes.

XC. Culture is transmitted by training and education; it is not a biologically transmitted complex (14:102).

Education is taught but not inherited: XVII:308-11

1. Discuss the learning process.
2. List various ways in which people learn.
3. Discuss environmental learning.
4. List several public institutions which aid the learning process.
5. Make a graph depicting the costs of education in the United States per year.

XCI. The learning process can act only with material already given in the body, and the material in the body can become human only when it is acted upon (14:111).

Learning refines an individual but only to his innate capacity: XVII:308-9

1. Analyze conservation aspects of innate human ability.
2. List ways in which education is beneficial to man.
3. Discuss the characteristics of a human being who has had no formal education.
4. Develop a list of ideas pertaining to refinement of each individual human being.
5. Diagram the requisites essential for educating a human being.

XCII. Education is the greatest instrument for training human beings in the use of symbols basic to their

survival and progress (14:114).

Education trains human beings for progress and survival: XVII:307

1. List pertinent reasons to illustrate the value of education as a "reservoir of knowledge."
2. Discuss Thomas Jefferson's ideas regarding education of human beings.
3. List reasons illustrating the value of education to American citizens.
4. Analyze the consequences of the destruction of a nation's educational institutions.
5. Draw a diagram of the state educational hierarchy.

XCIII. Man alone has the ability to develop and transmit learned behavior . . . (14:124).

Man alone can develop and teach trained behavior: VI:114-15

1. Discuss Abraham Lincoln's behavior as a war president.
2. Learn the issues at stake in the Civil War period.
3. Interpret contemporary racial problems in the United States of America.
4. Discuss the behavior of the opposing sides during the Civil War.
5. Write a theme concerning Union and Confederate

behavioral attitudes during the Civil War period.

VIII. ORGANIZATION

XCIV. To secure the proper technical utilization of resources, old forms of organizations are . . . revitalized, and new forms of organization are . . . created or foreshadowed, vaster in scale and more infused with conscious purpose than before (10:109).

Proper technical utilization of resources requires revitalization and creation of new forms of organization: VII:136-37

1. Discuss the dislocations created during a national economic depression.
2. Discuss the government's role during a national economic depression.
3. Write a report concerning the utilization of human resources during a national economic depression.
4. Analyze the consequences of a national economic depression upon human resources.
5. Study the contemporary economic scene as it applies to human beings in America.

XCV. In the endeavor to satisfy his wants, man builds up civilization (8:81).

Man builds up civilization in order to satisfy his wants: II:48-54

1. Read to determine how pioneers "changed" the wilderness.
2. Discuss the movement of White men into the frontier zone.
3. Compare the natural environment then and now.
4. Discuss how the landscape may change in the future.
5. Analyze the dislocations which the Indian suffered as a direct result of the White man's advanced civilization.

XCVI. Life in an organized society involves the collective effort to make human existence more meaningful and more satisfactory (8:81).

Collective effort within a society makes life more meaningful and satisfactory: I:1-22

1. Discuss colonial (American) resistance to English taxation policies.
2. Write a report concerning the organization of an American government during this period.
3. Learn a part of Ralph Waldo Emerson's "The Concord Hymn."
4. Construct a bulletin board depicting life in the colonies during the Revolutionary period.
5. Define revolution.

XCVII. In every society certain activities are considered of great importance to the common welfare (8:82).

Certain activities are considered of great importance in every society: I:31

1. Discuss the American form of government.
2. Analyze colonial aspirations during the Revolutionary War period.
3. Compose poems or stories to illustrate the social innovations which happened during the Revolutionary War period.
4. Share your ideas regarding freedom ideals.
5. Show film "Democracy."

XCVIII. The cultural values of every social group are necessarily at work to adjust the outer environment to their demands; to control, devise, and direct the technological means; and to win the conflict with opposing cultural values (8:88).

Every social group's cultural values are constantly at work in creation of new innovations: V:87-104

1. Relate the reasons for first American settlement of the Texas region in America's Southwest.
2. Discuss the social problems which arose in conflict with Mexican national interests.
3. Analyze the reasons for the "Battle of the Alamo."

4. Discuss the reasons why American settlers in the Texas region wished to join the United States as a state.
5. Draw a mural depicting American and Mexican social interactions.

XCIX. The individual is bound into society by his relations to others as individuals and by membership in groups (8:97).

Every individual is bound to society by his relations with others: 8:97

1. Discuss why the Pilgrims settled in America.
2. Learn the "Mayflower Compact."
3. Analyze the hardships borne by early settlers in the Massachusetts Bay area.
4. Discuss human dignity and belief.
5. Draw poster pictures depicting settlement of the Massachusetts Bay area.

C. The family is itself a way of living, and the way of living is always governed by a code (8:97).

The family is a distinct way-of-life and is governed by a code: II:44-45

1. Read to determine what family life was like during pioneer times.
2. Describe the requirements for a happy family.

3. Discuss the children's place in a family grouping.
4. Draw a chart depicting advantages and security enjoyed in a family setting but not enjoyed by orphans.
5. Discuss moral principles essential for a happy family grouping.

CHAPTER IV

SUMMARY AND CONCLUSIONS

This study utilized the generalization as a tool to provide greater increments to learning throughout the social studies curriculum. It has been specifically related to a study of human and natural resource conservation.

I. PURPOSES OF THE STUDY

It has been the purposes of this study (1) to select one-hundred generalizations related to resource conservation from a listing of approximately three-thousand items originating in seven Stanford doctoral dissertations, (2) to indicate the precise chapter and/or unit in a specific text (Brown, Gertrude S., Your Country and Mine, Our American Neighbors, Boston: Ginn & Company, 1958.) in which the teacher would develop a particular generalization, and (3) to develop a list of suggestions for each specific generalization compatible with resource conservation study.

II. REASONS FOR THE STUDY

This study has been concerned with the development of critical reasoning and rational thinking procedures of children. While realizing that educators have done excellent work in the past in this regard, it has been demonstrated repeatedly in recent years that the rapidity of change in

society demands new learning innovations to promote greater learning prowess. Adequate training of learners (future citizens) is very important and could easily spell the success or failure of this generation in meeting the challenges of contemporary life. It is, therefore, essential to promote any worthwhile teaching procedure if in its doing our social institutions would be invigorated or sustained.

III. PROCEDURE

This study has been concerned with experiential activities in support of appropriate generalizations emphasizing conservation of human and natural resources. Because all social interactions affect human and physical environments, it is essential to understand new innovations in order to most adequately serve society. Therefore, the scope of this writing has utilized the generalization supported by suggested activities to provide new and related experiences for learners commensurate with their separate abilities.

Finally, (as proved earlier in this writing) the usage of compatible generalizations in the study of resource conservation has been substantiated as a means to provide better understanding of the complex technological innovations and social phenomena which are constantly arising in contemporary times. Utilization of these tools to learning will quicken understanding of these vital areas in life.

IV. NATURAL RESOURCES

Throughout this study, resource conservation has been interpreted in social and natural connotations. Emphases have been placed on man's adjustment to new exceedingly complex social and technical problems facing contemporary society. Future complex social and technical innovations demand, therefore, that each citizen have a complete understanding of the role he must play. Jackson has stated (20:10):

> There are one-hundred eighty million people in the United States today. In forty years, at the present rate of increase, that number will be doubled. To continue our present standard of living, we will need roughly twice as much food, clothing, housing, and other products we derive from our natural resources. Since the land which supports will not expand, it will require more efficient use of what we already have. Even so, we may have to search the oceans to fulfill certain specific needs. Without the best conservation efforts, our present standard of living could dwindle to a mere memory of a squandered past.

Thus the prospect facing mankind demands intelligent planning to conserve man's social and cultural institutions. Conservation practices in the social and physical environments can no longer be limited to a few reformers but must involve all mankind. Taylor described appropriate attitudes and practices which would aid in this regard (26:262):

> I give my pledge as an American to save and faithfully to defend from waste the natural resources of my country--its soil and minerals, its forests, waters, and wildlife. . . . For the adjustment of numbers of people to their environment is basic to all other problems in

connection with resources for our future.

Taylor elaborated, in addition, on the social aspect confronting the American home (26:262):

> Do we raise our voices in objection to industry siphoning off the American mother, one of our country's most important resources, from the American home before her children are gone?

Taylor has summed up the situation very well in predicating the importance of human and natural resources to America as vital.

Finally, inasmuch as social and physical phenomena pertaining to resources must become knowledgeable by all people everywhere, it is proposed that new concept and skill-building practices utilizing the large central idea (generalization) are most appropriate. Greater citizenship capacities will be insured by their utility.

V. CONCLUSIONS

This study has interpreted the need for adequate understandings pertaining to contemporary and future social and technical innovations related to resource conservation. Rapid changes in modern times demand an increased perception by citizens of the many cultural problems and needs. This study has emphasized throughout that conservation principles must be understood by all citizens in order that affirmative action be taken in allocation practices. Many laudible

conclusions can be drawn from this study; a few, however, are most important in interpreting the problem; (1) the explosion of knowledge in the first half of the twentieth century is forcing educators to develop new techniques to teach children, (2) lists of generalizations prepared by experts in various fields do expedite curriculum planning by teachers, (3) the generalization provides a learning tool around which many experiences can be built, (4) the generalization can be utilized in all subject areas, (5) generalizing in resource conservation study enriches concept and skill developments, (6) generalizing in the social studies curriculum aids comprehension of citizenship roles to be played by the learner (future citizen), (7) usage of perceptive techniques (by generalizing) creates an awareness of the critical resource problems facing American society, and (8) rational and selective thinking are promoted more adequately by generalizing.

Finally, inasmuch as social and physical resource phenomena must become knowledgeable to all people, the means suggested for concept and skill-building activities utilizing the large central idea (generalization) are most appropriate. New skills and attitudes gained in these processes will insure greater citizenship capacities.

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